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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/683,783	10/10/2003	Liang-Jie Zhang	SOM920030003US1	1792

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EXAMINER
LY, CHEYNE D

ART UNIT	PAPER NUMBER
2168	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/683,783	**Applicant(s)** ZHANG ET AL.	
	Examiner Cheyne D. Ly	**Art Unit** 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-22 and 24-35* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-8,10-22 and 24-35* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 31, 2007 has been entered.

2. Applicants' arguments have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

3. Claims 1-8, 10, 15-22, 24, 25, and 35 are examined on the merits.

Claim Rejections - 35 USC § 103

4. Claims 1, 2, 7, 8, 10, 15, 16, 21, 22, 24, 25, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuecke et al. (July 2002) (Tuecke hereafter) in view of Kalali et al. (October 09, 2003) (Kalali hereafter).

MOTIVATION TO COMBINE

5. Tuecke describes OGSA to improve conventional Web services technologies to address the needs of distributed systems by using WSDL language (page 9, section 4.1). Kalali describes an improvement for monitoring interfaces of Web services and notification services when an interface changes or a service becomes disabled (page 3, column 1, lines 1-12). With improvement described by Kalali, "application developers can

eliminate the time consuming and the costly service troubleshooting that would otherwise occur during application development (page 3, column 1, lines 19-23). Therefore, one of ordinary skill in the art at the time of the invention would have been motivated by Kalali to improve the convention Web services technologies of Tuecke with the web monitoring to detect changes to eliminate the time consuming and the costly service troubleshooting that would otherwise occur during application development.

PRIO ART

6. In regard to claim 1, Tuecke discloses a method of discovering services available in accordance with an information network, comprising the steps of:

   Obtaining a request from a client to perform a search for one or more services (page 12, lines 32-33, and pages 32-33, sections 6.2);

   Searching a set of one or more service description documents, based on the client request (pages 32-33, sections 6.2, pages 43-44, section 10.1), wherein the searching step further comprises determining one or more changed service description documents in the set of one or more service description documents by detecting changes in one or more attributes of the one or more changed service description documents, wherein the searching step is configurable to be performed at different levels of granularity (page 12, section 4.4, especially, meta-data and state data, and pages 23-24, section 4.6, Change Management);

   Making a result of the search available to the client (page 43, lines 1-6).

7. Tuecke does not describe the "automatic detection of changes...and automatically collecting...to a user-specified maximum level of granularity for at least one of a depth of

search and a detection of changes." However, Kalali describes the "automatic detection of changes...and automatically collecting...to a user-specified maximum level of granularity for at least one of a depth of search and a detection of changes." For example, Kalali describes "Web service provides change their WSDL documents without informing service requestors" (page 4, column 1, 13-15). The proposed solution is a monitoring interface registry system to address problems related to changes in abstract and concrete interfaces based on consumers provided URL of abstract and concrete interface location to the service registry (granularity...of a depth). The SOMR notification service is responsible for monitoring any changes to the interfaces and notifying consumers of these changes along with the latest version of the interfaces (page 4, columns 1-2, Proposed Solution section).

8. Therefore, it would have been obvious to one of ordinary skill in the art to modify the system described by Tuecke to improve the convention Web services technologies with the web monitoring of changes described by Kalali to eliminate the time consuming and the costly service troubleshooting that would otherwise occur during application development.
9. In regard to claim 2, Tuecke discloses comparing at least a portion of a current instance of the set of one or more service description documents to at least a portion of a previous instance of the set of one or more service description documents (pages 23-24, section 4.6, Change Management, especially, "extended in a backward compatible manner, then, clients that require the previous definition...supports the new extended description").

10. In regard to claim 7, Tuecke discloses the step of obtaining information used to control performance of the search step (page 7, lines 9-12, especially, "allows certain efficiencies" and "avoiding the overhead of preparing for and executing the invocation").

11. In regard to claim 8, Tuecke discloses searching step is performed in association with multiple data sources (page 12, section 4.4, especially, meta-data and state data).

12. In regard to claims 10, 15, 16, 21, 22, 24, and 25, and 35, Tuecke discloses apparatus and article of manufacture (page 6, lines 20-22) for implementing the above-cited method.

13. Claims 5, 6, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuecke et al. (July 2002) (Tuecke hereafter) in view of Kalali et al. (October 09, 2003) (Kalali hereafter) as applied to claims 1, 2, 7, 8, 10, 15, 16, 21, 22, 24, 25, and 35 above, and further in view of Brittenham P. (2002) (Brittenham hereafter).

MOTIVATION

14. Kalali describes an improvement for monitoring interfaces of Web services and notification services when an interface changes or a service becomes disabled (page 3, column 1, lines 1-12). With improvement described by Kalali, "application developers can eliminate the time consuming and the costly service troubleshooting that would otherwise occur during application development (page 3, column 1, lines 19-23). While, Tuecke describes OGSA to improve conventional Web services technologies to address the needs of distributed systems by using WSDL language (page 9, section 4.1) and WS-Inspection document as described by Brittenham (page 43, section 10.1, and page 46, Reference 1). Therefore, one of ordinary skill in the art at the time of the invention

would have been motivated by Tuecke to improve the convention Web services technologies of Brittenham with the web monitoring described by Kalali to detect changes.

PRIOR ART

15. In regard to claims 5 and 19, Tuecke in view of Kalali describes all the limitations to claims 5 and 9 except for the limitation "aggregating a plurality of result set…" Brittenham describes the step of aggregating a plurality of result sets obtained during the searching step into an aggregated result (page 2, 4th paragraph, and page 3, lines 6-9, page 5, Linking to WS-Inspection documents section), and then making the aggregated result available to the client (page 2, lines 3-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve conventional Web services technologies to address the needs of distributed systems by using WS-Inspection document as described by Brittenham and Tuecke with the web monitoring described by Kalali to detect changes.
16. In regard to claims 6 and 20, Tuecke in view of Kalali describes all the limitations to claims 5 and 9 except for the limitation "plurality of result sets…" Brittenham describes the step of aggregating a plurality of result sets obtained during the searching step into an aggregated result (page 5, Linking to WS-Inspection documents section). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve conventional Web services technologies to address the needs of distributed

systems by using WS-Inspection document as described by Brittenham and Tuecke with the web monitoring described by Kalali to detect changes.

17. Claims 3, 4, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuecke et al. (July 2002) (Tuecke hereafter) in view of Kalali as applied to claims 1, 2, 7, 8, 10, 15, 16, 21, 22, 24, 25, and 35 above, and further in view of Lim et al. (2001) (Lim hereafter).

MOTIVATION

18. Kalali describes an improvement for monitoring interfaces of Web services and notification services when an interface changes or a service becomes disabled (page 3, column 1, lines 1-12). With improvement described by Kalali, "application developers can eliminate the time consuming and the costly service troubleshooting that would otherwise occur during application development (page 3, column 1, lines 19-23). Tuecke describes OGSA to improve conventional Web services technologies to address the needs of distributed systems by using WSDL language (page 9, section 4.1). While, Lim describes a method for characterizing changes in Web documents (page 141, Section 6). Therefore, one of ordinary skill in the art at the time of the invention would have been motivated by Tuecke to improve the convention Web services technologies of with the web monitoring described by Kalali and Lim to detect changes.

PRIOR ART

19. In regard to claims 3 and 17, Tuecke in view of Kalali describes all the limitations to claims 3 and 17 except for the limitation "service documents is stored in a cache." Lim

describes the caching of the entire web on a local file system for detecting and updating web document changes (page 141, Section 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve conventional Web services technologies to address the needs of distributed systems by using WS-Inspection document as described by Tuecke, Kalali, and Lim.

20. In regard to claims 4 and 18, Tuecke in view of Kalali describes all the limitations to claims 4 and 18 except for the limitation "one or more service description documents is used to update a cache." Lim describes the caching of the entire web on a local file system for detecting and updating web document changes (page 141, Section 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve conventional Web services technologies to address the needs of distributed systems by using WS-Inspection document as described by Tuecke, Kalali, and Lim.

CONCLUSION

21. The prior art made of record, Du et al., and not relied upon is considered pertinent to applicant's disclosure.

22. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants

of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

23. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199. The USPTO's official fax number is 571-272-8300.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached on (571) 272-3642.

/Cheyne D Ly/
C. Dune Ly
Primary Examiner
29/01/2008